BIO T.I.T. No.4
News Letter
Faculty of Bioscience and Biotechnology
Tokyo Institute of Technology

REORGANIZED OUR GRADUATE SCHOOL OF BIOSCIENCE AND BIOTECHNOLOGY

Professor Masuo Aizawa
Dean, Graduate School of Bioscience and Biotechnology
Tokyo Institute of Technology

I am most pleased to announce all of you that the Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, has started reforming to establish the research oriented education system in the coming century.

The four Departments in the Faculty of Bioscience and Biotechnology have been reorganized to the Department of Bioscience and the Department of Bioengineering in the School of Bioscience and Biotechnology. Undergraduate students take a liberty in studying a wider area of basic science and technology and are allowed to select their majors in the latter half of undergraduate school.

The three Departments have been launched in the Graduate School of Bioscience and Biotechnology, which includes the Departments of Life Science, Biological Information, and Biomolecular Engineering. Two more Departments will be established in 2000 fiscal year. It is noted that the Department of Biological Information is accessed equally by undergraduate students in Bioscience and Bioengineering Departments.

All the staffs in the School of Bioscience and Biotechnology are affiliated by the reorganized Graduate School of Bioscience and Biotechnology, although the reorganization will be completed in 2000 fiscal year. New undergraduate and graduate students in 1999 have been enrolled by the reorganized School and Graduate School of Bioscience and Biotechnology.

The Graduate School of Science and Technology is also under the process of reorganization. Such a reorganization has been proceeded in major universities these several years as a part of the education revolution lead by the Ministry of Education.

I believe that the School and Graduate School of Bioscience and Biotechnology should be strengthened enough to keep up the international leadership in the coming decade.

大学院重点化による改組

東京工業大学大学院生命理工学研究科長
生命理工学部長
相 澤 益 男

1990 年に創設された我が国初めての生命理工学部は早くも変革期を迎え、1999 年度から大学院重点化によって組織改革されることとなりました。学部においては幅広い専門基礎教育を充実させ、大学院においては適正規模の専門領域ごとの研究主導型教育を強力に推進し 21 世紀に持続的発展をし得るよう大学を活性化する施策であります。全体構想としては、大学院生命理工学研究科をバイオサイエンス専攻、バイオテクノロジー専攻の２専攻体制から５専攻体制（1999 年度に「分子生命科学専攻」、「生命情報専攻」、「生体分子機能工学専攻」、の３専攻が発足）に、生命理工学部を生命理学科、生体機構学科、生物工学科、生体分子工学科の４学科体制から「生命科学科」、「生命工学科」の２学科体制に改組いたします。生命理工学部創設にあたっては、理工学を基盤とした新しい生命理工学の体系化と総合的発展を高く掲げました。生命理工学部は数多くの優れた人材を輩出し、注目される研究成果を次々と世に問うてきました。当初の予測をはるかにしのぐ生命理工学の目覚ましい進展に生命理工学部はいささかの貢献をしてきたと自負しております。そして大学院重点化による新体制によって広く新しい人材を育て、生命理工学のフロンティア開拓を先導する所存であります。

The International Course for Advanced Research in Chemistry and Chemical Engineering

The International Course for Advanced Research in Chemistry and Chemical Engineering administered by Tokyo Institute of Technology is a program for well-qualified scientists who already hold a teaching or research position in a university or research institute. Its aim is to provide them with further education in as well as methodical preparation for their own research or educational activities.

This Course was inaugurated by Tokyo Institute of Technology in 1965 as the International Postgraduate University which was one of the UNESCO's projects in the field of natural sciences. Since 1965, 440 participants from 52 countries have pursued their studies with great earnest.

This year we have the following 7 participants who were selected from about 150 applicants.

Liu Jinchen (China), Myagmarsuren Gomboo (Mongolia), Paladi Florentin (Mordvinian), Thaminimulla Chandani Tikiri Kumari (Sri Lanka), Toran Kadir (Turkey), Yadav Amar Prasad (Nepal), Yingyongnarongkul Boon-ek (Thailand)

M. Gomboo and T. Kadir are studying in our faculty under Profs. Inoue and Nagata's guidances.

Every month some special training course is scheduled. As shown in the pictures, they are enjoying laboratory tours and visiting Bridgestone Factory.

I hope they return to their countries to play a leading role in their own fields and keep contact with our faculty.

Ichiro Okura
Director of The International Course
for Advanced Reserch

"Frontier Collaborative Research Center"

Professor Hiroshi Handa

The Cabinet of Japan has implemented the basic plan in July, 1996 to cope with serious concern over the present and future of Japanese international competitiveness in the fields of science and technology. This plan promotes the tight collaboration of university, industry and government to create new industries on the basis of scientific and technological achievements from universities. According to the plan, the Ministry of Eucation, Science, Culture and Sports has launched the Campus Incubation Scheme and the Frontier Collaborative Research Center (FCRC) in Tokyo Institute of Technology (TITech), because TITech is globally recognized for its scientific achievements including optical communication, ferrite and magnetic tape, quartz crystal and vitamin B2 breakthroughs and expected to seed technologies required for industry in the 21th century. The FCRC will facilitate the development of new technologies through its own research effort, as well as, by helping to coordinate university, government and private sector efforts. The FCRC which has two main functions, Collaborative Research Function and Liaison Function, was established in April 1998. As for Collaborative Research Function, there are five collaborative research projects in the fields of biotechnology, information technology, material science, and environmental technology, which have obtained outside funding through the efforts of FCRC Liaison Function. It is expected that a knowledgeable senior researcher would be chosen to fill the role of project leader and upon the completion of the project the research team would be dissolved. Liaison Function has three main activities, Project Formation Activity, Technology Transfer Activity and Venture Business Support Activity. Project Formation Activity is to coordinate collaborative research projects with industry and public research establishments by matching the seed academic research topics with the needs of industry. Those working in the Collaborative Research Function will carry out some of the research projects formed under this activity. Technology Transfer Activity is to develop a mechanism for technology transfer between academia and industry. For example, this activity are going to establish a Technology Licensing Organization (TLO), which administers inventions owned by academic staff, the Japanese government and TITech. Finally, Venture Support Activity is to open and utilize various technologies created by TITech to public.

My new laboratory in University of Tokyo

Dear Colleague,

I moved to the University of Tokyo in October 1997 after having been at Laboratory of Genetic Engineering, Department of Biotechnology for eight years and a half. The University of Tokyo is the largest and oldest national university in Japan, a total enrollment of over 27,000 including 1,800 foreign students. It is located in Bunkyo-ku, almost central area of Tokyo Metropolitan. In 1994, by general reform of the organization, former faculties were changed into graduate schools. My laboratory, Microbiology, belongs to Department of Biotechnology, graduate schools of Agriculture and Life Science.

We are continuing the research on morphology and enzyme production of *Aspergillus oryzae*, important microorganism in producing *sake*, *miso*, and soy source in Japan. *A. oryzae* is yellow conidia producing fungi and produces large quantities of amylase.

Softball is very popular sports in our department. Laboratories championship tournament is held every spring and autumn. All members of our laboratory, including professor, play softball in the match under the shining sun. When we won the game, we drink beer in celebration of the win, when we lost the game, we also drink to make a vow to win next game. I hope we will have chance to drink and discuss with you in Japan or somewhere in the world.

Best regards,

Harushi Nakajima

Harushi Nakajima, Ph. D
Department of Biotechnology
Graduate School of Agricultural and Life Sciences
The University of Tokyo

My new laboratory in Kobe University

Dear Colleague,

I moved to Kobe University in last April. I had been Tokyo Institute of Technology for 15 years since I entered the school. I worked at Department of Biomolecular Engineering. Kobe University is located in Kobe City, which, together with Kyoto and Osaka, is a principal city in Kansai area, about 550 km west of Tokyo. Kobe is an international city which has prospered mainly through the heavy industries and foreign trade as Yokohama city, with the population of about 1.5 million. Sandwiched between Rokko mountains and Seto Inland Sea, the city offers comfortable circumstances of living and various ways of enjoying leisure. It is four years ago that 6.9 Magnitude earthquake occurred around Kobe. Damage was recorded over a 100-kilometer radius from the epicenter, including the cities of Kobe, Osaka, and Kyoto, but Kobe and its immediate region were the areas most severely affected. Damage was particularly severe in central Kobe, in an area roughly 5 kilometers by 20 kilometers parallel to the Port of Kobe. Now almost damage is restored, and people are leading hopeful life again. My current work in Kobe is Organic Chemistry and Biochemistry. I intently feel here that level of research, education system and equipment in TIT is exceedingly high in Japan. You will have a same feeling after you leave there some day. I think there may be a opportunity to meet you again and I hope it.

With best regards,

Yasuhito Ebara

Yasuhito, Ebara
Division of Sciences for Natural Environment
Faculty of Human Development
Kobe University

A Brief History of Soccer at Nagatsuta

Dear Colleagues,

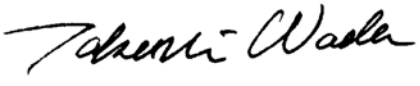
It was my great pleasure to play soccer with foreign colleagues at Nagatsuta Campus of TITech. We had a wide and nice playground for baseball and soccer at Nagatsuta before the construction of the new buildings of the Department of Life Science. I spent a really happy time at Nagatsuta from 1985 to 1999, at first as an undergraduate student and finally as a research associate.

In the 1986 World Cup, Diego Maradona of Argentina made a great impact on many people by his hot temper and high skills in Mexico. As a result of the Diego's magic, soccer tournaments were held every year during 1986 to 1988 at Nagatsuta for the Suzukake Festival. More than 30 teams took part in the tournament. Our team named "Playboys" consisted of students, post docs, and research associates from Korea, China, Indonesia, Egypt, Turkey, Brazil, and Japan. The official language of the international team was English, but no words were required for enjoying football games. We just kick a ball. After the games, we just drank beer. The most impressive game was the final of the 1986 tournament. I made two "fantastic" goals, but our team was beaten by 2-5 to the team of the Ookayama Office.

I moved from TITech to the University of Tokyo in this February. I am continuing the research on organic chemistry at the new laboratory. It is a pity that I have no time for playing soccer now. But I am planning to play chemical soccer games in a round-bottomed flask with "C60-fullerene" which is an organic molecule consists of 60 carbon atoms in the shape of a soccer ball.

I hope we will meet again and enjoy soccer and science in the near future.

With best regards,



Takeshi Wada
Department of Integrated Biosciences
Graduate School of Frontier Sciences
The University of Tokyo

I have belonged to the department of life science, T.I.T. for nine months. I accustom myself to the Nagatsuta campus life and enjoy studying with students in the campus.

In July 1, 1998, I was lucky enough to get an associate professor position in this department. Before then, I worked at the department of chemical engineering in this university and studied about the characterization of several bacteria in the bioreactor. Four years ago, furthermore, I served as a researcher in famous Japanese beer company, KIRIN Brewery. There I had two projects; elucidation of carotenoid biosynthesis passway and the development of yeast transformation system. I like beer best of all drinks and, now, drink the tasty beer every night.

At present, we research the environmental stress response of eukaryotic microoganisms such as yeast and mushroom. I hope to contribute toward the understanding of molecular mechanism of microbiology.

Susumu Kajiwara
Department of life science
Graduate school of Bioscience and Biotechnology

Dear Sir,

I am very glad to have the opportunity of expressing my gratitude to the Japanese Government for having given me a chance of pursuing my doctoral education in Japan.
I should also thank the Tokyo Institute of Technology for having introduced the International program to which I am affiliated.
And finally a big thank to Professor Unno laboratory for hosting me, special thank to my supervisor, Dr. Tanji whose relentless pursuit for perfection will be a new found virtue that I will have to carry forever.

I came from Canada where I was pursuing graduate studies in Microbiology and Immunology, particularly working on live vaccine for the protozoaire *Leishmania*.

I new coming to Japan would be a challenge for me since Japan is different in many cultural and educational aspects, and especially I would be starting a new project with little insight. However, the support that I received from my supervisor and indeed the whole laboratory was tremendous. The kind of support that I saw Dr. Tanji coming all the way to the station to welcoming me (I will not dare telling you how heavy my luggage were and how Dr. Tanji was in pain trying to carry them) And how he came on holidays just to help me finish my manuscript for publication.

In general term my work and my stay in Japan have been successful, I wish though I had learned more Japanese to make my experience even more rewarding.

I just hope that in turn I have brought something new to my host laboratory and that the relation that has been established here, will never end.

Anthony Muyombwe

LAST TRAIN PANIC

Having majored in Japanese and Japanese studies, I thought that I would be well prepared for life in Japan. It did not take long for that assumption to be destroyed. Last train panic, the push and shove to get on overcrowded trains, the noisy bustle of Shibuya or Shinjuku and the frustration caused by the constant shoe changes, can never be adequately described in a book. There was also much that I did not anticipate, including the long work hours, the humid summer, the over-reaching efforts to avoid conflict and the subtle, yet complicated group dynamics within the lab.

Extra challenges were presented by Wonda Vogel, a mountaineering club that I joined at TITech. As a research student using SINEs (Short Interspersed Repetitive Elements) to elucidate the phylogenetic relationships among African cichlid fishes, my lab was at the spacious and quiet (some would say boring) Nagatsuta campus. Although the one hour commute to the main campus at Ookayama to participate in club activities was inconvenient, the effort was well rewarded. Sporting clubs in Japan usually follow old traditions and mine was no different. There were many, many rules and every member had a prescribed role on club trips, based on their rank in the sempai (senior) - kohai (junior) system. This rigid hierarchy was a shock at first, but at the same time, it provided valuable insights into Japanese society.

Japan is a society with values that are very different to those I grew up with in Australia. An exciting part of the exchange was the opportunity to experience and to adapt to this fascinating culture. It was not always easy to study in Japan, but Tokyo is an exciting, vibrant city and the Japanese are friendly, helpful and extraordinarily generous. My only regret is that my ten month stay was far too short.

Enmoore Lin
Faculty of Bioscience and Biotechnology

We are glad to send you BIO TIT News Letter, No.4. This is an annual news letter from the almini of Faculty of Bioscience & Biotechnology, Tokyo Institute of Technology. We hope that this newletter serve you an opportunity to keep in touch with one another and make your international network solid.

We need your recent profile including a brief description on your current work to update the TIT Who's Who List. You are very welcome to send your correspondence in any form and contents.

We wish each of your continued success in your activities.

東工大生命理工学部卒業生の皆様へ

本年より、東工大生命理工学部の同窓会組織が新しく発足しました。これまで、海外の卒業生の皆様には、このBioTIT news Letterを毎年一回お送りしてきましたが、これからは、東工大生命理工学部の全ての卒業生の皆様に、このニュースレターをお送りする予定です。卒業生の皆さんの近況を是非このニュースレターにお寄せ下さい。英語でも日本語でも結構です。

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